

(12) UK Patent Application (19) GB (11) 2 235 850 (13) A

(43) Date of A publication 13.03.1991

(21) Application No 8919087.0

(22) Date of filing 22.08.1989

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(51) INT CL⁶
H04M 1/02

(52) UK CL (Edition K)
H4J JK

(56) Documents cited
GB 2201861 A GB 2087686 A GB 2058516 A
GB 1185777 A GB 1151784 A

(58) Field of search
UK CL (Edition J) H4J JAAB JK
INT CL⁴ H04M 1/00 1/02 1/03

(54) Telephone handset

(57) A telephone handset comprising a body portion 1 supporting a mouthpiece 2, and earpiece 3 and a keypad 7, in which the said mouthpiece 2 is located on a movable support 4 such that it may be extended from the body portion (by e.g. pivoting, sliding or telescoping) when the handset is required for a call, and when not in use the support 4 may be retracted. This provision allows the user to reduce the length of the handset when this is not needed for a call and it thus permits storage in a compact condition when the handset is idle.

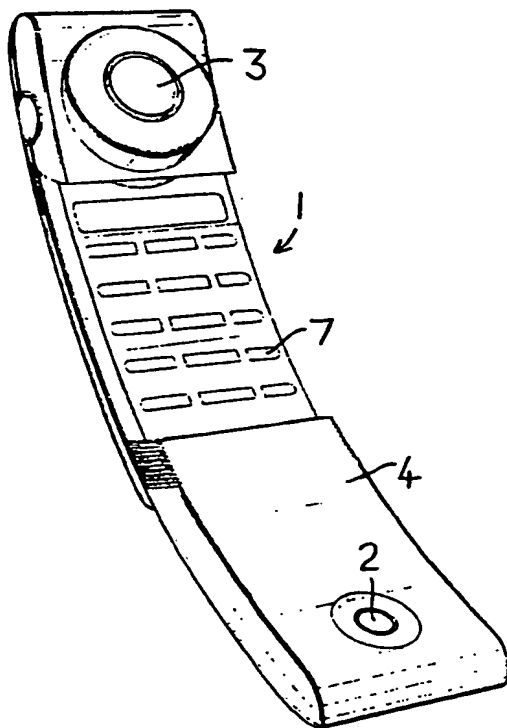


Fig 5

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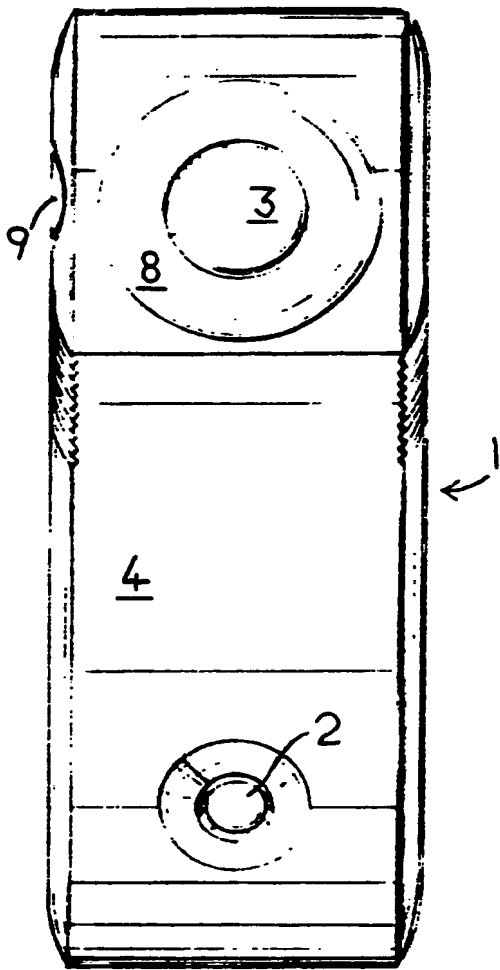


Fig. 1



Fig. 2

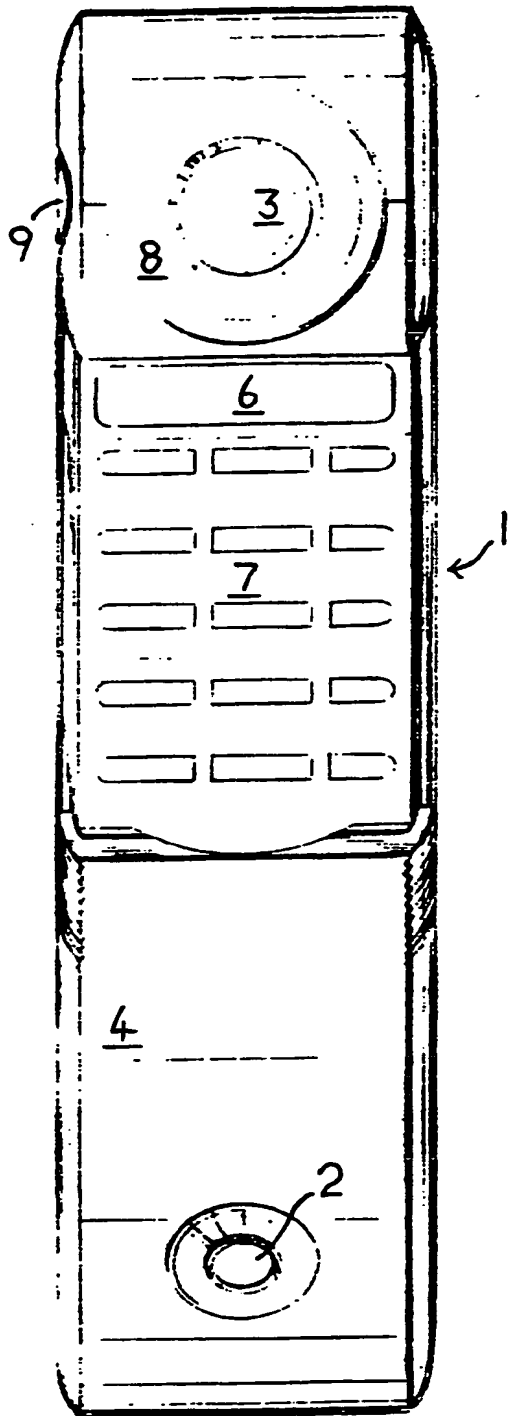


Fig 3

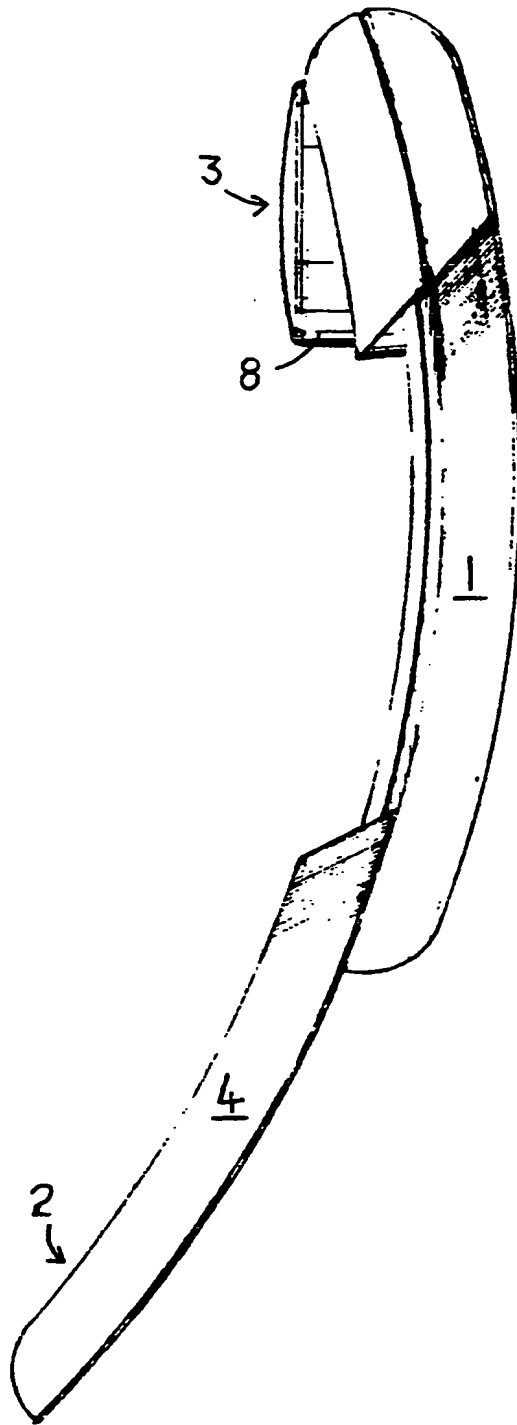


Fig 4

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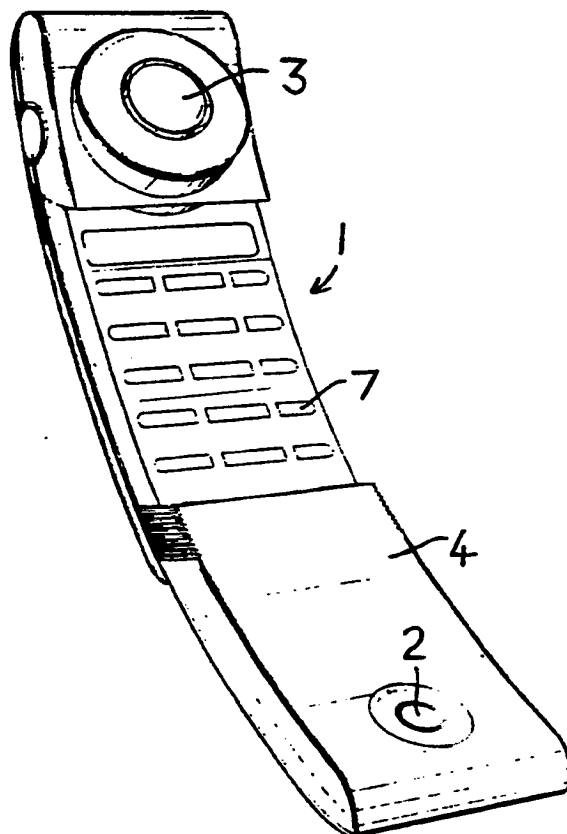


Fig. 5

TELEPHONE HANDSET

This invention relates to a telephone handset. It relates particularly to a portable handset of rather a compact construction which may be sufficiently small in size as to be carried conveniently in the pocket of a user yet which is capable of functioning normally when necessary.

In the design of a handset for portable telephone use, the instrument needs to be of a size to enable a mouthpiece and an earpiece to be supported appropriately next to the user's head. The mouthpiece and earpiece must therefore be spaced a particular distance apart and a generally concave shape is made necessary in order to fit the shape of the head. In addition, it would be convenient if the handset could be made rather small in size so that after it had been used it could be carried easily and could possibly be accommodated in a pocket of the user.

The present invention was devised in an attempt to reconcile these apparently conflicting requirements.

According to the invention, there is provided a telephone handset comprising a body portion supporting a mouthpiece, an earpiece and a keypad, in which the said mouthpiece is located on a movable support such that it may be extended from the body portion when the handset is required for a call, and when not in use the support may be retracted. This provision allows the user to reduce the length of the handset when this is not needed for a call and it thus permits storage in a compact condition when the handset is idle.

The movable support may operate by a pivoting or a sliding action. A further possibility would be a telescoping action.

In one embodiment, the moveable support includes a microphone located adjacent the mouthpiece. In a different embodiment, the movable support carries an acoustic tube extending from said mouthpiece to a microphone located on the body portion.

The body portion may be provided with a catch and spring means effective to urge the movable support from the retracted to the extended position upon release of the catch. The catch may include a release button located on a side of the body portion.

By way of example, a particular embodiment of the invention will now be described with reference to the accompanying drawings, in which:-

Figures 1 and 2 are front and side views respectively of the telephone handset in the retracted condition,

Figure 3 and 4 are similar views with the movable mouthpiece support in the extended position, and,

Figure 5 is a perspective view.

As shown in Figure 1, the telephone handset has a body portion 1 which supports a mouthpiece 2 and an earpiece 3. The handset in the configuration depicted in Figures 1 and 2 is arranged in a compact format which will be particularly convenient for carrying in a pocket or briefcase of the user.

The mouthpiece 2 is located on a movable mouthpiece support 4 which is arranged to be slidable with respect to the body portion 1. The handset with the mouthpiece support 4 fully extended is depicted in Figures 3 and 4. When moved to the extended position,

the support 4 allows a display window 6 and a telephone keypad 7 on the body portion 1 to be seen. The keypad 7 is able to be used normally by the user in making a call and the display window 6 is used to show the number entered or to give other information.

The earpiece 3 is located on a movable earpiece support 8 which is spring-loaded towards an extended position as shown in Figure 4. When the handset is arranged in its compact format as shown in Figure 2, a catch (not shown) controlled by a push button 9 serves to retain the earpiece support 8 in its retracted position.

In operation of the telephone handset, when it is required to make an outgoing call, the user will press the push button 9 to extend the earpiece support and pull out the mouthpiece support 4. The handset will then be of a suitable size to be used normally against the user's head. The number required can be entered on the keypad 7. At the end of the call, the user may close up the extended parts of the handset and it is then returned to a compact condition for storage in a pocket or briefcase.

When an incoming call is received, the telephone handset has its own built-in tone generator, and when this has been actuated, the user may open up the extendable parts of the handset so that the call can be taken in comfort.

In the embodiment just described, the mouthpiece support 4 is provided with an acoustic tube (not shown) by which the mouthpiece is brought into communication with a microphone mounted on the body portion 1. In a different embodiment it would be possible for the microphone to be a movable one located immediately behind the

mouthpiece 2 on the mouthpiece support 4. Such an arrangement would then avoid the need for the acoustic tube in the support 4.

The foregoing description of an embodiment of the invention has been given by way of example only and a number of modifications may be made without departing from the scope of the invention as defined in the appended claims. For instance, the release button arranged to extend the mouthpiece may be connected internally so that it will simultaneously release a folding or sliding earpiece of the handset.

It is not essential that the folding telephone should be one of the cordless kind. There is still a great convenience in using a phone that occupies only a small space when it is out of use, and the construction could readily be applied to the conventional phone which is attached by wire to a junction box on the wall.

CLAIMS:-

1. A telephone handset comprising a body portion supporting a mouthpiece, an earpiece and a keypad, in which the said mouthpiece is located on a movable support such that it may be extended from the body portion when the handset is required for use, and when not in use the support may be retracted.

2 A handset as claimed in Claim 1, in which the movable support is arranged to operate by a pivoting, sliding or telescoping action.

3. A handset as claimed in Claim 1 or 2, in which the movable support includes a microphone located adjacent the mouthpiece.

4. A handset as claimed in Claim 1 or 2, in which the movable support carries an acoustic tube extending from said mouthpiece to a microphone located on the body portion.

5. A handset as claimed in any one of Claims 1 to 4, in which the body portion is provided with a catch and spring means effective to urge the movable support from the retracted to the extended position upon release of the catch.

6. A handset as claimed in Claim 5, in which the said catch includes a release button located on a side of said body portion.

7. A telephone handset substantially as hereinbefore described with reference to any one of the accompanying drawings.

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